



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-1486; Project Identifier AD-2022-01026-T]

RIN 2120-AA64

Airworthiness Directives; Gulfstream Aerospace Corporation Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for certain Gulfstream Aerospace Corporation Model G-1159A, G-1159B and all G-IV, and GIV-X airplanes. This proposed AD was prompted by a report that the ground spoiler actuator installation allows improper hydraulic line connections that could result in unintended asymmetrical spoiler deployment. This proposed AD would require incorporating corrective actions that physically prevent improper connection of the hydraulic lines to the ground spoiler actuator. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to [regulations.gov](https://www.regulations.gov). Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

AD Docket: You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2022-1486; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Samuel Belete, Aerospace Engineer, Systems and Equipment Section, FAA, Atlanta ACO Branch, 1701 Columbia Avenue, College Park, GA 30337; phone: 404-474-5580; email: 9-ASO-ATLACO-ADs@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2022-1486; Project Identifier AD-2022-01026-T” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to [regulations.gov](https://www.regulations.gov), including any personal

information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Samuel Belete, Aerospace Engineer, Systems and Equipment Section, FAA, Atlanta ACO Branch, 1701 Columbia Avenue, College Park, GA 30337; phone: 404-474-5580; email: 9-ASO-ATLACO-ADs@faa.gov. Any commentary that the FAA receives that is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The FAA has received a report that a Gulfstream Model G-IV airplane was involved in a fatal accident on December 15, 2021 after spoilers deployed in an asymmetrical manner. The asymmetrical spoiler deployment resulted in in-flight loss of control of the airplane. The fatal flight was the first flight after maintenance actions where the spoiler hydraulic lines were improperly connected (reversed) to the ground spoiler actuator. The ground spoiler actuator configuration allows improper hydraulic line connections during maintenance action as a result of identically threaded connections in close proximity to each other. Improper connection of the ground spoiler hydraulic lines, if not addressed, could result in unintended asymmetrical spoiler deployment, leading to

reduced controllability of the airplane, or loss of control of the airplane in-flight or upon landing.

FAA's Determination

The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Proposed AD Requirements in this NPRM

This proposed AD would require incorporating corrective actions (includes replacing a ground spoiler actuator hydraulic hose and associated fittings) that physically prevent improper connection of the hydraulic lines to the ground spoiler actuator.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 550 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

Estimated costs				
Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Incorporating corrective actions (includes replacing the hydraulic hose to the ground spoiler actuator and associated fittings)	16 work-hours X \$85 per hour = \$1,360	\$500	\$1,860	\$1,023,000

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator.

Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil airplane in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and
- (3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Airplane, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

The FAA amends § 39.13 by adding the following new airworthiness directive:

Gulfstream Aerospace Corporation: Docket No. FAA-2022-1486; Project Identifier AD-2022-01026-T.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to the Gulfstream Aerospace Corporation airplanes identified in paragraphs (c)(1) through (4) of this AD, certificated in any category.

(1) Model G-1159A airplanes having S/Ns 385, 387, 388, and 390 through 498 inclusive.

(2) Model G-1159B airplanes having S/Ns 009, 016, 042, 048, 054, 064, 086, 088, 095, 098, 102, 119, 123, 125, 131, 140, 151, 154, 155, 156, 165, 166, 189, 198, 199, 207, 219, 237, 245, 254, 255, and 257

(3) Model G-IV airplanes, all serial numbers.

(4) Model GIV-X airplanes, all serial numbers.

(d) Subject

Air Transport Association (ATA) of America Code 27, Flight Controls.

(e) Unsafe Condition

This AD was prompted by a report that a Gulfstream Model G-IV airplane was involved in a fatal accident on December 15, 2021 after spoilers deployed in an asymmetrical manner. The asymmetrical spoiler deployment resulted in in-flight loss of control of the airplane. The fatal flight was the first flight after maintenance actions where the spoiler hydraulic lines were improperly connected (reversed) to the ground spoiler actuator. The ground spoiler actuator configuration allows an incorrect connection of the ground spoiler hydraulic lines. The FAA is issuing this AD to prevent incorrect connection of the hydraulic lines to the ground spoiler actuator. The unsafe condition, if not addressed, could result in unintended asymmetrical spoiler deployment leading to reduced controllability of the airplane, or loss of control of the airplane in-flight or upon landing.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

At the applicable time specified in paragraph (g)(1) or (2) of this AD, incorporate corrective actions (includes replacing a ground spoiler actuator hydraulic hose and associated fittings) that physically prevent improper connection of the hydraulic lines to the ground spoiler actuator, in accordance with a method approved by the Manager, Atlanta ACO Branch, FAA.

(1) For Model G-1159A, G-1159B, and G-IV airplanes: Within 18 months after the effective date of this AD.

(2) For Model GIV-X airplanes: Within 60 months after the effective date of this AD.

(h) Alternative Methods of Compliance (AMOCs)

The Manager, Atlanta ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (i) of this AD.

(i) Related Information

For more information about this AD, contact Samuel Belete, Aerospace Engineer, Systems and Equipment Section, FAA, Atlanta ACO Branch, 1701 Columbia Avenue, College Park, GA 30337; phone: 404-474-5580; email: 9-ASO-ATLACO-ADs@faa.gov.

(j) Material Incorporated by Reference

None.

Issued on November 16, 2022.

Christina Underwood, Acting Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

[FR Doc. 2022-25693 Filed: 11/23/2022 8:45 am; Publication Date: 11/25/2022]